State of Utah

JON M. HUNTSMAN, JR.
Governor

GARY R. HERBERT
Lieutenant Governor

Department of Administrative Services
D'ARCY DIXON PIGNANELLI
Executive Director

Division of Facilities Construction and Management
F. KEITH STEPAN
Director

ADDENDUM

Date:	28 February 2006	
To:	Contractors	
From:	Darrell Hunting, DFCM – Project Manager	
Reference:	Utah National Guard – Ogden Armory Roofing, Mechanical, Electrical, and Window Improvements DFCM Project No. 05040470	
Subject:	**Addendum No. 1**	
Pages	Cover Page	1 page
	Addendum	5 page
	Addendum drawings	5 pages
	Total	**11 pages**

Note: This Addendum shall be included as part of the Contract Documents. Items in this Addendum apply to all drawings and specification sections whether referenced or not involving the portion of the work added, deleted, modified, or otherwise addressed in the Addendum. Acknowledge receipt of this Addendum in the space provided on the Bid Form. Failure to do so may subject the Bidder to disqualification.

State of Utah
Division of Facilities Construction and Management
4110 State Office Building
Salt Lake City, Utah 84114

Utah National Guard
Ogden Armory-Roofing Improvements
Project Number: 05040470

Addendum Number 1
27 February, 2006

Information contained within this addendum modifies project drawings and specifications previously issued and becomes a part of the contract documents. Acknowledge receipt of this addendum in your bid proposal.

Index to Addendum Number 1

Harold P. Woodruff Architect\Planner
223 East 800 South
Salt Lake City, Utah 84111
801-355-8684

Clarifications and Modifications

1. Bulletproof glass will not be required in any of the new window or door systems.

2. The exterior and interior Entry Lobby door and window system will be replaced with new storefront window framing and doors (along with all of the existing window systems). This new system will be 2" x 4" aluminum storefront as per construction documents. The exterior doors shall have 1" insulated glazing and the interior doors shall have ¼" glazing. All glazing in the doors and sidelight windows shall be clear, tempered. Glazing in the transom shall not be tempered.
   The Entry Lobby interior and exterior door/window framing shall be configured as per the existing door/window system with the exception that there shall be no framing member between the door panels. Doors shall be installed in the exterior and interior Entry Lobby window framing.
   The contractor shall be responsible for:
   a. Field verifying the existing conditions and dimensions.
   b. Furnishing and installing all accessories and trim for a complete installation.
   c. Repairing and painting any damage that occurs during removal and installation of window system.
   d. The building shall be secured if the doors cannot be installed in one day. This may be done by the sequence of interior and exterior door/window system or temporary wall at exterior wall.
   e. Removal and disposal of existing window system and glazing.

   Door Specifications:
   A. MATERIALS

      1. Materials shall be 6063-T5 alloy and temper (ASTM B221 alloy G.S. 10A-T5). Fasteners, where exposed, shall be aluminum, stainless steel or zinc plated steel in accordance with ASTM A 164. Perimeter anchors shall be aluminum. Glazing gaskets shall be EPDM elastomeric extrusions or vinyl reinforced with fiberglass cord to prevent stretching.

      2. Jambs and major portions of doors shall have minimum wall thickness of .188".

      3. Face dimensions of door components shall be 3-1/2" for vertical stiles, 3-3/16" for top rail and 10" (plus ½" for glass stops) for bottom rail. Frame sections shall be tubular members and shall provide for flush glazing of sidelites and transom areas.

      4. Applied stops shall be allowed at header bar only.

      5. Overall dimension of framing members shall be 2" x 4-1/2" to accommodate 1" glass.

      6. Frames for offset doors shall feature snap-in door stops with continuous weatherstripping.

      7. Screws, nuts, washers, bolts, rivets and other fastening devices, shall be aluminum, stainless steel or other non-corrosive materials.

   B. DOOR CONSTRUCTON

Door stiles and rails shall be tubular sections, sections, accurately joined at corners with heavy concealed reinforced brackets secured with bolts and screws, and shall be MIG welded. Doors shall have snap-in stops with bulb glazing gasket both sides of glass. No exposed screws shall be permitted. Each door leaf shall be equipped with an adjusting mechanism, located in the top rail near the lock stile, which provides for minor clearance adjustments after installation. Door bottom rail shall receive a concealed weatherstripping insert.

C. HARDWARE

Hardware for aluminum door and door frame shall be the entrance manufacturers standard. Coordinate and install all portions of the existing security entry system.

1. 1 ½ pair butt hinges per door leaf.
2. Key lock/cylinder per door leaf.
3. LCN 4041 closer per door leaf.
4. Push/pull per door leaf.
5. Von Duprin panic hardware 98NL-OP per door leaf.

3. Existing roof drains are to removed and replaced with new roof drains.

4. The roof edge flashing details in the construction documents indicate that the lower portion of the prefinished metal is to remain.
The contractor is to replace all the metal on the fascia (the lower section and the cover clip). The fascia metal is to be prefinished metal. The prefinished metal finish for the fascia, equipment screen and aluminum storefront window system may not be same finish.

5. See attached mechanical and electrical addendum.

Mechanical Addendum #1

To:	Dan DeZotell	**Telephone:**	801-355-8684
Company:	Harold Woodruff Architect 223 East 800 South Salt Lake City, Utah 84111	**Fax:** **Copies to:**	801-359-3780
From:	Ken Ekenstam	**Telephone:**	801-401-8480
Job:	Ogden Armory Roofing Improvements	**Toll Free:**	800-678-7077
Re:	Mechanical Addendum	**Fax:**	801-401-9480
Job Number:	20050433	**E-mail:**	kde@spectrum-engineers.com
Date:	February 27, 2006	**Page:**	1 of 1

DRAWINGS

SHEET M-101

1. Replace existing door grille in exercise room with new 26" x 24" Price model STG-1 door grille. The exercise room is located at the same location as exhaust fan EF-1.

SHEET M-410

1. Refer to Rooftop Unit Schedule: Delete note 5.
2. Refer to Exhaust Fan Schedule: The exhaust fan horsepower is ¼.

OGDEN ARMORY ROOFING IMPROVEMENTS

DFCM PROJECT NO. 05040470

February 24, 2005

ELECTRICAL ADDENDUM ITEMS

1. Change Overhead Electrical Service to Underground Electrical Service.

   A. Change Overhead Electrical Service to Underground Electrical Service as shown on Electrical Drawings, Revision No. 1.

   B. Work for underground electrical service includes, but is not limited to, the following:

      1) New underground conduit from existing power pole to new pad mounted transformer.

      2) New precast concrete vault with precast concrete lid.

      3) New separately mounted current transformer cabinet, meter base, and main breaker.

      4) New underground secondary conduit and conductors as indicated on drawings.

      5) Sawcut, remove, and replace existing asphalt paving and concrete slabs necessary to install new underground electrical service.

      6) Installation of new underground electrical service in accordance with Utah Power Electrical Service Requirements Manual dated August 2005.

      7) Coordination with Utah Power for installation of new electrical service in a timely manner. Utah Power Work Order Number and contact information will be furnished to the contractor after the contract is awarded. Contractors are not to contact Utah Power during bidding.

   C. Delete references to Overhead Electrical Service in Specification Section 16400, Paragraph 2.2. Provide underground electrical service indicated on Electrical Drawings, Revision No. 1.

   D. Delete references to Metering Switchboard in Specification Section 16400, Paragraph 2.3, and Section 16470 Paragraph 2.2. Provide separate metering cabinet, meter base, and main breaker indicated on Electrical Drawings, Revision No. 1.

   E. Utah Power costs for installation of new underground electrical service will be paid by the Owner directly to Utah Power and is not included in the contract.

2. Change Conduit Routing to Rooftop AC Units RTU-1 and RTU-2.

   A. Change conduit routing to Rooftop AC Unit RTU-1 and RTU-2 to avoid installation of exposed conduit in the Main Entry Vestibule. See First Floor Electrical Plan, Sheet E-102, Revision No. 1.

3. Add Switch for New Exhaust Fan EF-1.

   A. Provide single pole switch in Exercise Room to control new Exhaust Fan EF-1. See Second Floor Electrical Plan, Sheet E-103, Revision No. 1.

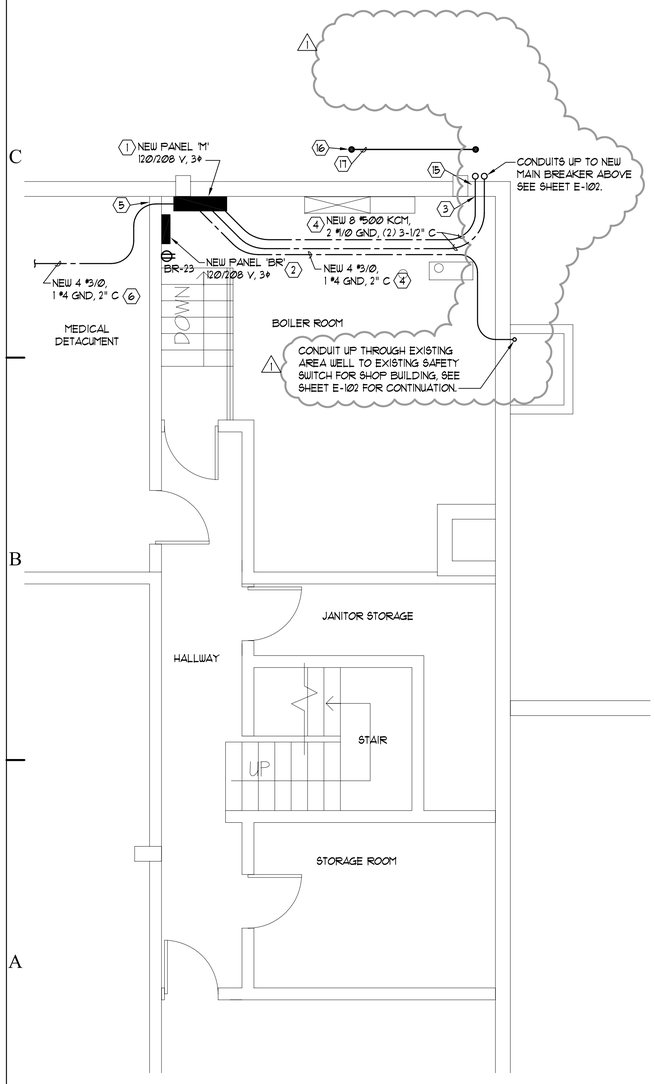
4. Attachments:

   A. Sheets E-101, E-102, E-103, E-104 and E-601, Revision No. 1 dated Feb. 24, 2006.

END OF ELECTRICAL ADDENDUM ITEMS

DELETE CONCRETE PULLBOX DETAIL

1



A1 ENLARGED ELECTRICAL PLAN
SCALE: 1/4" = 1'-0"
0 2' 4' 8'

NORTH

NEW PANEL 'BR'
TYPE 'NQOD', BOLT ON
3 POLE 225 AMP MAIN LUGS

22,000 A.I.C., SERIES OR FULLY RATED
120/208 VOLT, 3 PHASE, 4 WIRE
SURFACE MOUNTED

CIR NO.	P	BRKR AMPS	DESCRIPTION	NO. LTS	NO. REC	CIRCUIT LOAD	PHASE LOAD - VA PHASE A	PHASE B	PHASE C	CIRCUIT LOAD	NO. REC	NO. LTS	DESCRIPTION	P	BRKR AMPS	CIR NO.
1	1	20	LTS, MEDICAL DET. *	8		1,600	2,700			1,100		7	LTS, BOILER RM & HALL *	1	20	2
3			LTS, MECICAL DET. *	4		800		1,700		900		6	LTS, STORAGE *			4
5			LTS, STORAGE *	6		900			1,900	1,000		1	LTS, STORAGE *			6
7			LTS, STORAGE *	1		1,000	1,300			300		2	LTS, OUTSIDE FRONT DOOR *			8
9			REC, LOWER LEVEL *		7	1,260		1,860		600		4	LTS, DMS PARKING *			10
11			EXISTING - VERIFY *			1,000			1,500	500			UH CIRC PUMP *			12
13			EXIT LIGHTS +			1,000	2,000			1,000			EXISTING - VERIFY *			14
15			SPARE					500		500			BOILER CONTROL (BURNER) *			16
17			SPARE						1,500	1,500			SUMP, AIR COMP & CIRC *			18
19			SPARE				500			500			BOILER & DDC CONTROLLER +			20
21			SPARE					0					SPARE			22
23	1	20	REC, BELOW PANEL		1	180			180				SPARE			24
25	3	15	MAIN CIRCULATING PUMP *			830	830						SPARE	1	20	26
27	-	-	-			830		4,830		4,000			EXISTING - VERIFY +	2	60	28
29	-	-	-			830			4,830	4,000			-	-	-	30
31	2	40	EXISTING - VERIFY +			3,000	3,000						SPACE	1		32
33	-	-	-			3,000		3,000								34
35	1		SPACE						0							36
37							0									38
39								0								40
41	1		SPACE						0				SPACE	1		42
							10,330	11,890	9,910							

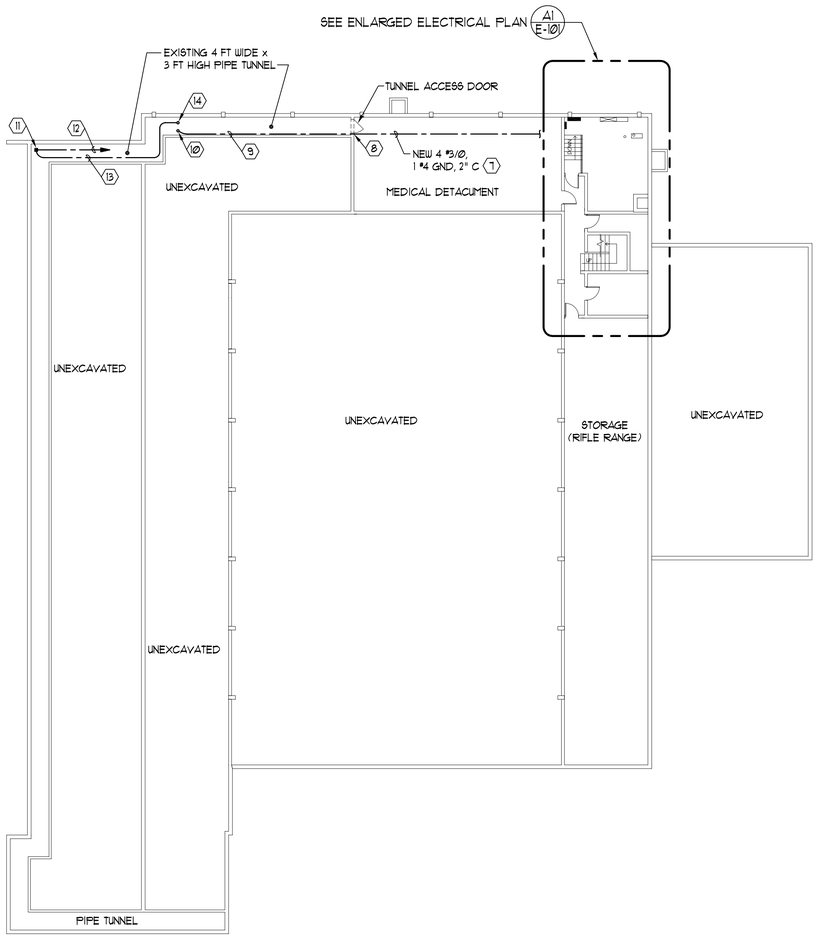
TOTAL CONNECTED LOAD: 32,130 VA 89 AMPS
CALCULATED FEEDER DEMAND, NEC 220: 35,678 VA 99 AMPS FEEDER: 4 #3/0, 1 #4 GND, 2" C

* EXISTING CIRCUIT TO BE RECONNECTED FROM EXISTING PANEL 'BR' TO NEW PANEL 'BR'. LOAD IS ESTIMATED
+ EXISTING CIRCUIT CONNECTED TO SEPARATE SAFETY SWITCH OR BREAKER. EXTEND CIRCUIT TO NEW PANEL 'BR'. LOAD IS ESTIMATED.

FIELD VERIFY LOAD SERVED BY ALL EXISTING CIRCUITS AND INDICATE ON NEW TYPEWRITTEN PANEL INDEX.

1 PANEL 'BR' SCHEDULE MOVED FROM SHEET E-601, NO CHANGE TO SCHEDULE.

3



A3 LOWER LEVEL ELECTRICAL PLAN
SCALE: 1/16" = 1'-0"
0 8' 16' 32'

NORTH

4

5

GENERAL ELECTRICAL NOTES:

1. LOCATIONS OF EXISTING ELECTRICAL EQUIPMENT, BRANCH CIRCUIT WIRING, ETC., ARE BASED ON EXISTING BUILDING ELECTRICAL DRAWINGS AND FIELD OBSERVATION OF EXISTING SURFACE CONDITIONS. FIELD VERIFY EXISTING LOCATIONS AND CIRCUITING AND IMMEDIATELY NOTIFY THE ARCHITECT OF ANY DISCREPANCIES WHICH MAY ADVERSELY AFFECT COMPLETION OF THE WORK.

2. DEMOLITION IS SHOWN FOR CONTRACTORS REFERENCE ONLY. FIELD VERIFY QUANTITIES AND LOCATIONS OF ALL EXISTING MATERIAL AND EQUIPMENT TO BE REMOVED. REMOVE ALL ABANDONED CONDUIT WIRING, JUNCTION BOXES, OUTLETS, EQUIPMENT, ETC., WHETHER SPECIFICALLY SHOWN OR NOT.

3. TAKE ALL PRECAUTIONS NECESSARY TO AVOID DAMAGE TO THE EXISTING BUILDING. REPAIR ALL DAMAGE INCURRED BY DEMOLITION AND NEW CONSTRUCTION TO EXACTLY MATCH SURROUNDING SURFACES AND/OR CONDITIONS WITHOUT ADDITIONAL COST TO THE OWNER. COORDINATE REPAIRS WITH THE GENERAL CONTRACTOR.

4. INDICATED NEW CONDUIT ROUTING IS APPROXIMATE ONLY. FIELD COORDINATE NEW CONDUIT ROUTING WITH EXISTING LIGHT FIXTURES, EXISTING CONDUITS, EXISTING PIPING, ETC.

5. PAINT ALL NEW EXPOSED CONDUIT TO MATCH SURROUNDING SURFACES EXCEPT CONDUIT IN BOILER ROOM WILL NOT BE REQUIRED TO BE PAINTED. COORDINATE PAINT COLOR SELECTION WITH ARCHITECT.

KEYED NOTES:

1. NEW PANEL 'M' TO REPLACE EXISTING PANEL 'M' AT THE SAME LOCATION. RECONNECT ALL EXISTING FEEDERS AS SHOWN ON POWER RISER DIAGRAMS, SHEET E-601.
2. NEW PANEL 'BR' TO REPLACE EXISTING PANEL 'BR' AT THE SAME LOCATION. RECONNECT ALL EXISTING CIRCUITS INCLUDING CIRCUITS SERVED BY SEPARATE SAFETY SWITCHES AND ENCLOSED BREAKERS. SEE POWER RISER DIAGRAMS AND PANEL SCHEDULE, SHEET E-601.
1. 3. CORE-DRILL EXISTING EXTERIOR FOUNDATION WALL FOR NEW CONDUIT PENETRATIONS AND SEAL WATERTIGHT WITH NON-SHRINK GROUT. DRILL OVER-SIZED HOLE AT ANGLE AS REQUIRED FOR INSTALLATION OF RIGID STEEL ELBOWS TO MAIN BREAKER ABOVE.
4. INSTALL NEW CONDUITS BELOW EXISTING MECHANICAL PIPING AND MINIMUM 12" FROM EXISTING HOT WATER SUPPLY AND RETURN PIPING. DO NOT BLOCK ACCESS TO ANY VALVES, ETC., IN THE EXISTING PIPING.
5. CORE-DRILL AND FIRE SEAL EXISTING CONCRETE WALL FOR NEW CONDUIT PENETRATION.
6. NEW FEEDER TO NEW PANEL 'H' ON MAIN LEVEL, SEE LOWER LEVEL ELECTRICAL PLAN, THIS SHEET, FOR CONTINUATION.
7. INSTALL CONDUIT EXPOSED THROUGH EXISTING MEDICAL DETACAMENT ROOM, PAINT TO MATCH EXISTING CEILING. INSTALL MINIMUM 12" FROM EXISTING HOT WATER SUPPLY AND RETURN PIPING.
8. CORE-DRILL AND FIRE SEAL EXISTING CONCRETE WALL ABOVE EXISTING TUNNEL ACCESS DOOR FOR CONDUIT PENETRATION. LOCATE AS FAR AS POSSIBLE FROM EXISTING HOT WATER SUPPLY AND RETURN PIPING.
9. INSTALL NEW CONDUIT ON WALL OF EXISTING TUNNEL MINIMUM 12" FROM EXISTING HOT WATER SUPPLY AND RETURN PIPING.
10. CONDUIT UP TO NEW PANEL 'H' ON MAIN LEVEL ABOVE, SEE SHEET E-101. CORE-DRILL AND FIRE SEAL EXISTING CONCRETE FLOOR FOR NEW CONDUIT PENETRATION.
11. EXISTING DOMESTIC WATER MAIN ENTRANCE TO BUILDING IN PIPE TUNNEL. FIELD VERIFY EXACT LOCATION.
1. 12. NEW #3/0 INSULATED GROUNDING ELECTRODE CONDUCTOR, 1-1/2" C FROM EXISTING WATER MAIN TO GROUND BUS IN NEW MAIN BREAKER. INSTALL CONDUIT AS REQUIRED FOR NEW FEEDER CONDUIT TO NEW PANEL 'H' INCLUDING, DRILLING, PAINTING, ETC.
13. NEW #8 GND, 3/4" FROM EXISTING WATER MAIN TO NEW ANTENNA MASTS IN ACCORDANCE WITH NEC 810-15 AND 810-21.
14. CONDUIT UP TO MAIN LEVEL, SEE SHEET E-102 FOR CONTINUATION. CORE-DRILL AND FIRE SEAL EXISTING CONCRETE FLOOR FOR NEW CONDUIT PENETRATION.
15. PROVIDE (2) 1-1/2" CONDUITS THROUGH EXISTING EXTERIOR FOUNDATION WALL FOR NEW GROUNDING ELECTRODE AND BONDING CONDUCTORS (NOT SHOWN).
1. 16. NEW 3/4" x 10'-0" COPPER GROUND RODS. PROVIDE #3/0 BARE COPPER GROUND CONDUCTOR IN 1-1/2" PVC CONDUIT SLEEVE TO NEW MAIN BREAKER GROUND BUS.
17. NEW #3/0 BARE COPPER GROUND CONDUCTOR BURIED 24" BELOW GRADE. CONNECT TO GROUND RODS BY EXOTHERMIC WELD.

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Mechanical Engineer:
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Electrical Engineer:
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Phone: 801-484-8161

REGISTERED PROFESSIONAL ENGINEER RAYMOND G. KOLKMAN 175780 2/24/06 STATE OF UTAH

PROJECT TITLE:

Ogden Armory-Roofing Improvements

OWNER:

State of Utah-DFCM

Utah National Guard
Salt Lake City, Utah

MARK	DATE	DESCRIPTION
1	2/24/06	ADDENDUM NO. 1

ISSUE TYPE: CONSTRUCTION DOCUMENTS

ISSUE DATE: JAN. 30, 2006

DFCM PROJECT NO:	05040470
CONTRACT NO:	057039
CAD PROJECT NO:	N/A
CAD DWG FILE:	E-101.dwg
ARCH PROJECT FILE:	0505.prj\0505.db\cps.dr
DRAWN BY:	W.B.G.
CHK'D BY:	R.G.K.
COPYRIGHT:	State of Utah

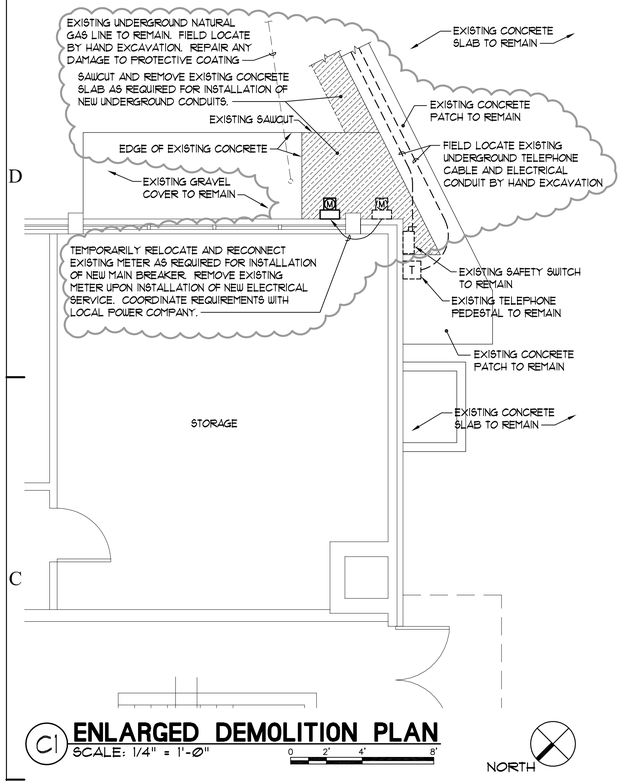
SHEET TITLE

LOWER LEVEL ELECTRICAL PLAN

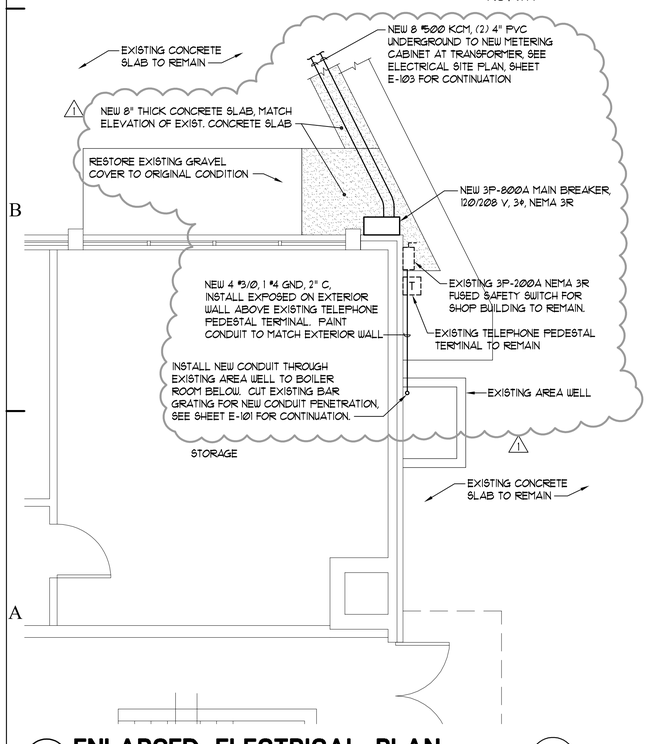
SHEET NUMBER

E-101

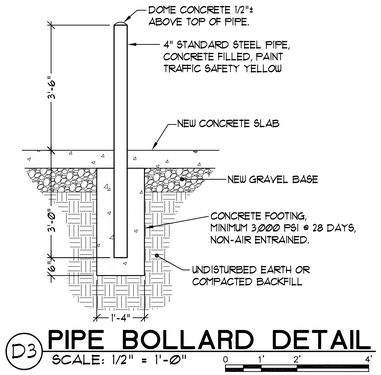
SHEET OF



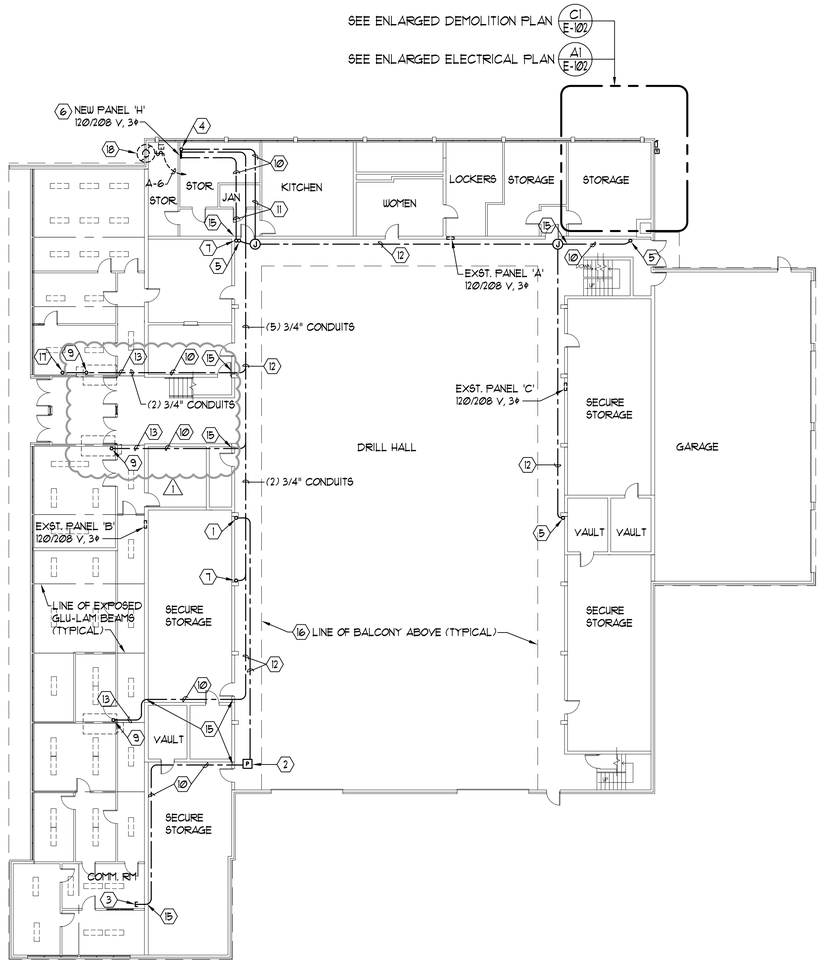
C1 ENLARGED DEMOLITION PLAN
SCALE: 1/4" = 1'-0"



A1 ENLARGED ELECTRICAL PLAN
SCALE: 1/4" = 1'-0"



D3 PIPE BOLLARD DETAIL
SCALE: 1/2" = 1'-0"



A3 FIRST FLOOR ELECTRICAL PLAN
SCALE: 1/16" = 1'-0"
NORTH

GENERAL ELECTRICAL NOTES:

1. LOCATIONS OF EXISTING ELECTRICAL EQUIPMENT, BRANCH CIRCUIT WIRING, ETC., ARE BASED ON EXISTING BUILDING ELECTRICAL DRAWINGS AND FIELD OBSERVATION OF EXISTING SURFACE CONDITIONS. FIELD VERIFY EXISTING LOCATIONS AND CIRCUITING AND IMMEDIATELY NOTIFY THE ARCHITECT OF ANY DISCREPANCIES WHICH MAY ADVERSELY AFFECT COMPLETION OF THE WORK.
2. DEMOLITION IS SHOWN FOR CONTRACTORS REFERENCE ONLY. FIELD VERIFY QUANTITIES AND LOCATIONS OF ALL EXISTING MATERIAL AND EQUIPMENT TO BE REMOVED. REMOVE ALL ABANDONED CONDUIT WIRING, JUNCTION BOXES, OUTLETS, EQUIPMENT, ETC., WHETHER SPECIFICALLY SHOWN OR NOT.
3. TAKE ALL PRECAUTIONS NECESSARY TO AVOID DAMAGE TO THE EXISTING BUILDING. REPAIR ALL DAMAGE INCURRED BY DEMOLITION AND NEW CONSTRUCTION TO EXACTLY MATCH SURROUNDING SURFACES AND/OR CONDITIONS WITHOUT ADDITIONAL COST TO THE OWNER. COORDINATE REPAIRS WITH THE GENERAL CONTRACTOR.
4. COORDINATE NEW MECHANICAL EQUIPMENT LOCATIONS WITH MECHANICAL PLANS AND MECHANICAL CONTRACTOR.
5. INDICATED NEW CONDUIT ROUTING IS APPROXIMATE ONLY. FIELD COORDINATE NEW CONDUIT ROUTING WITH EXISTING LIGHT FIXTURES, EXISTING CONDUITS, EXISTING PIPING, ETC.
6. PAINT ALL NEW EXPOSED CONDUIT TO MATCH SURROUNDING SURFACES INCLUDING DECORATIVE PAINT BANDS ON EXISTING WALLS. COORDINATE PAINT COLOR SELECTION WITH ARCHITECT.

KEYED NOTES:

1. NEW 1-1/4" ANTENNA CONDUIT WITH PULL STRING FROM SECOND LEVEL, SEE SHEET E-103 FOR CONTINUATION.
2. PROVIDE MINIMUM 12" x 12" x 6" PULLBOXES AS REQUIRED FOR NEW ANTENNA CONDUIT RUN.
3. TERMINATE ANTENNA CONDUIT WITH INSULATED BUSHING IN EXISTING COMMUNICATION OFFICE. FIELD COORDINATE EXACT LOCATION WITH ARCHITECT AND UTAH NATIONAL GUARD.
4. NEW #8 ANTENNA GROUND, 3/4" CONDUIT, FROM PIPE TUNNEL BELOW. SEE SHEET E-101 FOR CONTINUATION.
5. NEW #8 ANTENNA GROUND, 3/4" CONDUIT UP TO SECOND LEVEL. SEE SHEET E-103 FOR CONTINUATION.
6. INSTALL NEW PANEL 'H' ADJACENT TO EXISTING SHELVING TO AVOID EXISTING PIPING ABOVE THE PANEL LOCATION. SEE SHEET E-101 FOR ROUTING OF NEW FEEDER CONDUIT FROM PIPING TUNNEL BELOW.
7. (2) 3/4" CONDUITS UP TO SECOND LEVEL FOR ROOFTOP AIR CONDITIONING UNITS ON MID-LEVEL ROOF. SEE SHEET E-103 FOR CONTINUATION.
8. 3/4" CONDUIT UP TO SECOND LEVEL FOR NEW ROOFTOP AIR CONDITIONING UNIT ON MID-LEVEL ROOF. SEE SHEET E-103 FOR CONTINUATION.
9. 3/4" CONDUIT THROUGH EXISTING WOOD DECK ROOF TO NEW ROOFTOP AIR CONDITIONING UNIT ON LOW-LEVEL ROOF. INSTALL CONDUIT WITHIN AREA OF NEW ROOF CURB. SEE SHEET E-104 FOR CONTINUATION.
10. INSTALL NEW CONDUIT EXPOSED ON EXISTING CONCRETE PAN CEILING AND PAINT TO MATCH CEILING.
11. INSTALL NEW CONDUIT CONCEALED ABOVE EXISTING CEILINGS.
12. INSTALL NEW CONDUITS EXPOSED ON BOTTOM OF EXISTING BALCONY AND PAINT TO MATCH EXISTING CEILING.
13. INSTALL NEW CONDUIT EXPOSED ON SIDE OF EXPOSED GLU-LAM BEAM AND PAINT TO MATCH BEAM.
14. INSTALL NEW CONDUIT EXPOSED ON BOTTOM OF EXPOSED WOOD ROOF DECK CEILING AND PAINT TO MATCH CEILING.
15. DRILL EXISTING MASONRY BLOCK WALL BELOW EXISTING BOND BEAM FOR NEW CONDUIT PENETRATION. FIRE SEAL NEW CONDUIT PENETRATION.
16. DRILL EXISTING CONCRETE BALCONY FOR NEW CONDUIT PENETRATIONS TO SECOND LEVEL BEING CAREFUL NOT TO CUT THROUGH EXISTING REINFORCING STEEL. SEAL CONDUIT PENETRATION WITH NON-SHRINK GROUT PAINTED TO MATCH SURROUNDING SURFACES.
17. 3/4" CONDUIT THROUGH EXISTING WOOD DECK ROOF TO NEW FLAGPOLE FLOODLIGHTS ON LOW-LEVEL ROOF. SEE SHEET E-104 FOR CONTINUATION.
18. REMOVE EXISTING ELECTRICAL SERVICE TO EXISTING WALL MOUNTED EXHAUST FAN TO BE REMOVED INCLUDING ALL ABANDONED WIRING, CONDUIT, BOXES, ETC..

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Phone: 801-401-8480

Electrical Engineer:
Thomas & Kolkman Eng. Co. Inc.
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Phone: 801-484-8161

REGISTERED PROFESSIONAL ENGINEER
RAYMOND Q. KOLKMAN
175780
3/24/06
STATE OF UTAH

PROJECT TITLE:

Ogden Armory-Roofing Improvements

OWNER:

State of Utah-DFCM

Utah National Guard
Salt Lake City, Utah

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CHK'D BY:	R.G.K.
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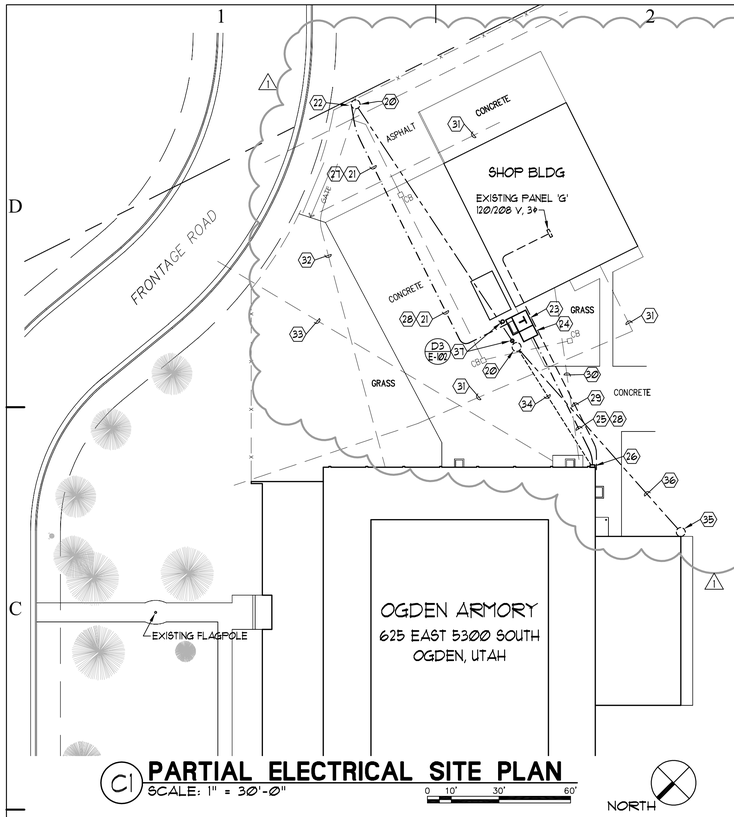
SHEET TITLE

FIRST FLOOR ELECTRICAL PLAN

SHEET NUMBER

E-102

SHEET OF



C1 PARTIAL ELECTRICAL SITE PLAN

SCALE: 1" = 30'-0"

0 10' 30' 60'

SITE PLAN KEYED NOTES:

20. EXISTING POWER COMPANY POWER POLE TO REMAIN.
21. NEW 4" PVC PRIMARY SERVICE CONDUIT MINIMUM 30" BELOW GRADE BY CONTRACTOR. PRIMARY SERVICE CABLES TO BE PROVIDED BY POWER CO.
22. TERMINATE NEW 4" CONDUIT WITH 36" RADIUS RIGID STEEL ELBOW AT BASE OF POWER POLE AS DIRECTED BY POWER COMPANY.
23. NEW PAD MOUNT TRANSFORMER BY POWER COMPANY. CONTRACTOR TO PROVIDE NEW AMCOR OR EQUAL PRECAST CONCRETE VAULT WITH PRECAST LID IN ACCORDANCE WITH POWER COMPANY REQUIREMENTS. FIELD VERIFY EXACT LOCATION OF TRANSFORMER WITH OWNER AND POWER COMPANY PRIOR TO EXCAVATION.
24. NEW POST MOUNTED METERING CABINET AND METER SOCKET, SEE POWER RISER DIAGRAM, SHEET E-601, FOR REQUIREMENTS.
25. NEW 8 #500 KCM, (2) 4" PVC, MINIMUM 24" BELOW GRADE BY CONTRACTOR.
26. NEW MAIN BREAKER, SEE POWER RISER DIAGRAM, SHEET E-601 FOR REQUIREMENTS.
27. SAWCUT AND REMOVE EXISTING ASPHALT PAVING TO INSTALL NEW UNDERGROUND CONDUIT. REPLACE WITH NEW ASPHALT PAVING AS REQUIRED TO MATCH EXISTING CONDITIONS.
28. SAWCUT AND REMOVE EXISTING 7-1/2" THICK CONCRETE SLAB TO INSTALL NEW UNDERGROUND CONDUIT AND NEW TRANSFORMER VAULT. REPLACE WITH NEW CONCRETE SLAB AND NEW SUBBASE AS REQUIRED TO MATCH EXISTING CONDITIONS.
29. EXISTING UNDERGROUND ELECTRICAL AND TELEPHONE SERVICES TO SHOP BUILDING TO REMAIN.
30. EXISTING UNDERGROUND GAS LINE TO SHOP BUILDING TO REMAIN.
31. EXISTING UNDERGROUND SANITARY SEWER PIPE TO SHOP BUILDING TO REMAIN.
32. EXISTING UNDERGROUND TELEPHONE SERVICE TO MAIN BUILDING TO REMAIN.
33. EXISTING UNDERGROUND GAS LINE TO MAIN BUILDING TO REMAIN.

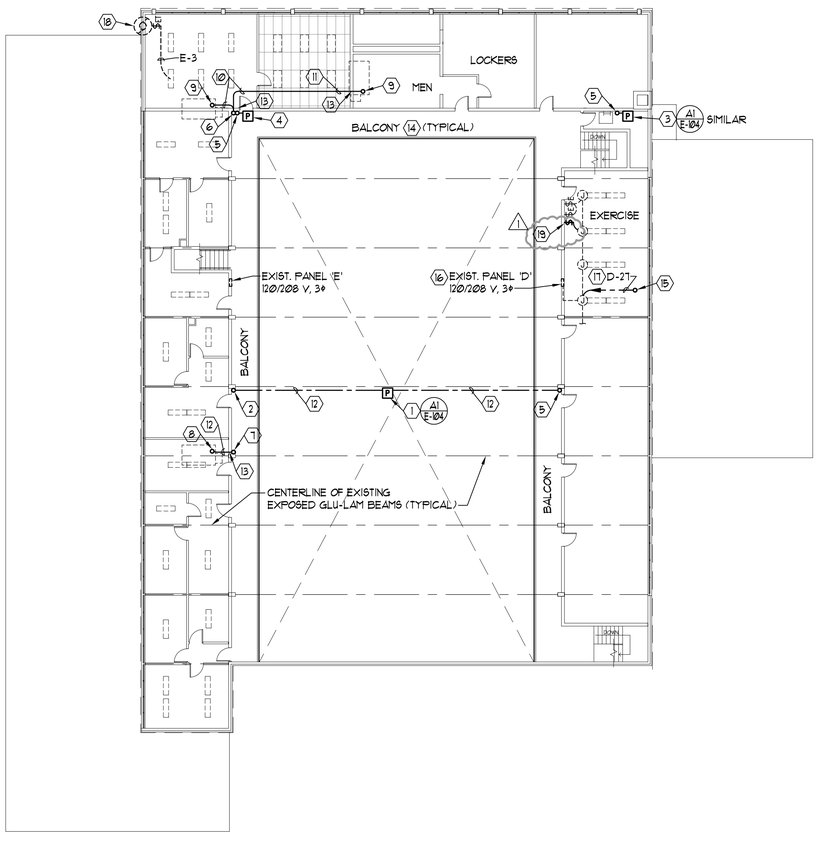
SITE PLAN GENERAL NOTES:

1. BURY UNDERGROUND PRIMARY CONDUIT MINIMUM 30" BELOW FINISH GRADE WITH RED MAGNETIC WARNING TAPE STATING "CAUTION - BURIED ELECTRICAL" 12 INCHES ABOVE THE CONDUIT.
2. BURY UNDERGROUND SECONDARY CONDUITS MINIMUM 24" BELOW FINISH GRADE WITH RED MAGNETIC WARNING TAPE STATING "CAUTION - BURIED ELECTRICAL" 12 INCHES ABOVE THE CONDUIT.
3. USE GALVANIZED RIGID STEEL CONDUIT (GRC) FOR ALL CONDUIT THROUGH GRADE AND ELBOWS IN PVC CONDUIT RUNS. CORROSION PROTECT GRC CONDUIT IN ACCORDANCE WITH SPECIFICATION SECTION 16190.
4. PROVIDE MINIMUM 36" RADIUS GRC ELBOWS FOR NEW ELECTRICAL SERVICE CONDUITS.
5. PROVIDE 1/4" NYLON PULL ROPE IN NEW ELECTRICAL SERVICE CONDUITS FOR INSTALLATION OF CONDUCTORS BY POWER COMPANY.
6. COORDINATE INSTALLATION OF NEW ELECTRICAL SERVICE AND METERING WITH LOCAL POWER COMPANY PRIOR TO BEGINNING WORK. UTAH POWER WORK ORDER NUMBER AND CONTACT INFORMATION WILL BE PROVIDED TO CONTRACTOR.
7. EXISTING UNDERGROUND UTILITIES ARE SHOWN FOR REFERENCE ONLY. LOCATIONS ARE BASED ON EXISTING BUILDING DRAWINGS AND FIELD OBSERVATION OF EXISTING SURFACE CONDITIONS. CONTACT BLUE STAKES TO LOCATE UNDERGROUND UTILITIES PRIOR TO EXCAVATION.
8. IMMEDIATELY REPAIR ANY DAMAGE TO EXISTING UNDERGROUND UTILITIES TO MATCH ORIGINAL CONDITION INCLUDING IRRIGATION SPRINKLERS, PROTECTIVE COATINGS ON GAS LINES, ETC. REPLACE EXISTING GRASS SOD TO MATCH ORIGINAL CONDITION.

34. EXISTING OVERHEAD SECONDARY SERVICE CABLE TO BE REMOVED BY POWER CO.
35. EXISTING LEASE LIGHT POLES TO REMAIN.
36. EXISTING OVERHEAD CABLE TO LEASE LIGHT POLES TO REMAIN.
37. PROVIDE CONCRETE FILLED PIPE BOLLARDS TO PROTECT TRANSFORMER AS REQUIRED BY POWER COMPANY.

SYMBOL LIST

SYMBOL	DESCRIPTION
	NEW FLOODLIGHT
	EXISTING FLOODLIGHT
P	NEW PHOTOCELL
J	NEW JUNCTION BOX
P	NEW PULL BOX
	NEW DUPLEX RECEPTACLE
	EXISTING DUPLEX RECEPTACLE
GFI	DUPLEX RECEPTACLE WITH GROUND FAULT CIRCUIT INTERRUPTER
A-13 3	3 PHASE, 4 WIRE HOMERUN INDICATING PANEL AND CIRCUIT NUMBERS
	NEW BRANCH CIRCUIT CONCEALED ABOVE EXISTING CEILING
	NEW BRANCH CIRCUIT EXPOSED ON WALL OR CEILING, PAINT TO MATCH
	EXISTING BRANCH CIRCUIT
	NEW PANELBOARD
	EXISTING PANELBOARD
	NEW MOTOR
	EXISTING MOTOR
$TH	NEW MANUAL MOTOR STARTING SWITCH WITH THERMAL OVERLOAD PROTECTION
$ET	EXISTING SINGLE POLE MANUAL MOTOR DISCONNECT SWITCH
NF	EXISTING SAFETY SWITCH, 'F' INDICATES FUSED, 'NF' INDICATES NON-FUSED
F	NEW SAFETY SWITCH, 'F' INDICATES FUSED, 'NF' INDICATES NON-FUSED
1	KEYED NOTE SYMBOL
RTU-1	EQUIPMENT SCHEDULE SYMBOL
F-1	FIXTURE SCHEDULE SYMBOL
A1 / E-101	DETAIL OR SECTION NUMBER DESIGNATED BY SHEET COORDINATES
	SHEET ON WHICH DETAIL OR SECTION IS SHOWN
WP	INDICATES ITEM IN WEATHERPROOF (NEMA 3R MINIMUM) ENCLOSURE



A3 SECOND FLOOR ELECTRICAL PLAN

SCALE: 1/16" = 1'-0"

0 8' 16' 32'

GENERAL ELECTRICAL NOTES:

1. LOCATIONS OF EXISTING ELECTRICAL EQUIPMENT, BRANCH CIRCUIT WIRING, ETC. ARE BASED ON EXISTING BUILDING ELECTRICAL DRAWINGS AND FIELD OBSERVATION OF EXISTING SURFACE CONDITIONS. FIELD VERIFY EXISTING LOCATIONS AND CIRCUITING AND IMMEDIATELY NOTIFY THE ARCHITECT OF ANY DISCREPANCIES WHICH MAY ADVERSELY AFFECT COMPLETION OF THE WORK.
2. DEMOLITION IS SHOWN FOR CONTRACTORS REFERENCE ONLY. FIELD VERIFY QUANTITIES AND LOCATIONS OF ALL EXISTING MATERIAL AND EQUIPMENT TO BE REMOVED. REMOVE ALL ABANDONED CONDUIT WIRING, JUNCTION BOXES, OUTLETS, EQUIPMENT, ETC., WHETHER SPECIFICALLY SHOWN OR NOT.
3. TAKE ALL PRECAUTIONS NECESSARY TO AVOID DAMAGE TO THE EXISTING BUILDING. REPAIR ALL DAMAGE INCURRED BY DEMOLITION AND NEW CONSTRUCTION TO EXACTLY MATCH SURROUNDING SURFACES AND/OR CONDITIONS WITHOUT ADDITIONAL COST TO THE OWNER. COORDINATE REPAIRS WITH THE GENERAL CONTRACTOR.
4. COORDINATE NEW MECHANICAL EQUIPMENT LOCATIONS WITH MECHANICAL PLANS AND MECHANICAL CONTRACTOR.
5. INDICATED NEW CONDUIT ROUTING IS APPROXIMATE ONLY. FIELD COORDINATE NEW CONDUIT ROUTING WITH EXISTING LIGHT FIXTURES, EXISTING CONDUITS, EXISTING PIPING, ETC.
6. PAINT ALL NEW EXPOSED CONDUIT TO MATCH SURROUNDING SURFACES INCLUDING DECORATIVE PAINT BANDS ON EXISTING WALLS. COORDINATE PAINT COLOR SELECTION WITH ARCHITECT.

KEYED NOTES:

1. NEW PULLBOX FOR NEW ANTENNA MAST ON HIGH ROOF. MOUNT PULLBOX ON SIDE OF EXISTING GLU-LAM BEAM AND PAINT TO MATCH BEAM.
2. NEW 1-1/4" ANTENNA CONDUIT WITH PULL STRING DOWN TO FIRST LEVEL, SEE SHEET E-102 FOR CONTINUATION.
3. NEW PULLBOX AND ANTENNA MAST FOR EXISTING SATELLITE DISH, SIMILAR TO DETAIL A1/E-104 EXCEPT WITH MINIMUM 8" x 8" x 4" SCREW COVER PULLBOX. EXISTING COMMUNICATION CABLES WILL BE RELOCATED TO NEW PULLBOX BY UTAH NATIONAL GUARD.
4. NEW 8" x 8" x 4" SCREW COVER PULLBOX FOR RADIO ANTENNA. MOUNT 12 FT± ABOVE SECOND LEVEL FLOOR. PROVIDE 1" CONDUIT THROUGH EXTERIOR CONCRETE BLOCK WALL AND TERMINATE WITH WEATHERHEAD ABOVE MID-LEVEL ROOF. SEAL CONDUIT PENETRATION THROUGH WALL WATERTIGHT WITH NON-SHRINK GROUT TO MATCH EXTERIOR BRICK COLOR. PAINT PULLBOX TO MATCH INTERIOR WALL.
5. NEW #8 ANTENNA GROUND, 3/4" CONDUIT, FROM FIRST LEVEL BELOW. SEE SHEET E-102 FOR CONTINUATION.
6. (2) 3/4" CONDUITS FROM FIRST LEVEL FOR ROOFTOP AIR CONDITIONING UNITS ON MID-LEVEL ROOF. SEE SHEET E-102 FOR CONTINUATION.
7. 3/4" CONDUIT FROM FIRST LEVEL FOR NEW ROOFTOP AIR CONDITIONING UNIT ON MID-LEVEL ROOF. SEE SHEET E-102 FOR CONTINUATION.
8. 3/4" CONDUIT THROUGH EXISTING WOOD DECK ROOF TO NEW ROOFTOP AIR CONDITIONING UNIT ON MID-LEVEL ROOF. INSTALL CONDUIT WITHIN AREA OF NEW ROOF CURB. SEE SHEET E-104 FOR CONTINUATION.
9. 3/4" CONDUIT THROUGH EXISTING CONCRETE PAN ROOF TO NEW ROOFTOP AIR CONDITIONING UNIT ON MID-LEVEL ROOF. INSTALL CONDUIT WITHIN AREA OF NEW ROOF CURB. SEE SHEET E-104 FOR CONTINUATION.
10. INSTALL NEW CONDUIT EXPOSED ON EXISTING CONCRETE PAN CEILING AND PAINT TO MATCH CEILING.
11. INSTALL NEW CONDUIT CONCEALED ABOVE EXISTING CEILINGS.
12. INSTALL NEW CONDUIT EXPOSED ON SIDE OF EXPOSED GLU-LAM BEAM AND PAINT TO MATCH BEAM.
13. DRILL EXISTING MASONRY BLOCK WALL BELOW EXISTING BOND BEAM FOR NEW CONDUIT PENETRATION. FIRE SEAL NEW CONDUIT PENETRATION.
14. DRILL EXISTING CONCRETE BALCONY FOR NEW CONDUIT PENETRATIONS TO FIRST LEVEL BEING CAREFUL NOT TO CUT THROUGH EXISTING REINFORCING STEEL. SEAL CONDUIT PENETRATION WITH NON-SHRINK GROUT PAINTED TO MATCH SURROUNDING SURFACES.
15. NEW 3/4" CONDUIT THROUGH EXISTING WOOD DECK ROOF TO NEW ROOFTOP EXHAUST FAN. EXTEND CONDUIT TO EXISTING SURFACE MOUNTED CONDUIT FOR LIGHTING IN EXERCISE ROOM. PROVIDE NEW WIRING IN EXISTING CONDUIT TO NEW 1P-15A BREAKER IN EXISTING PANEL 'D'.
16. PROVIDE NEW 1P-15A GENERAL ELECTRIC TYPE 'THQB' BRANCH CIRCUIT BREAKER IN EXISTING PANEL 'D' TO SERVE NEW ROOFTOP EXHAUST FAN EF-1. PROVIDE NEW TYPEWRITTEN CIRCUIT INDEX TO REFLECT ALL CHANGES IN CIRCUITING.
17. INSTALL NEW CONDUIT EXPOSED ON BOTTOM OF EXPOSED WOOD ROOF DECK CEILING AND PAINT TO MATCH CEILING.
18. REMOVE EXISTING ELECTRICAL SERVICE TO EXISTING WALL MOUNTED EXHAUST FAN TO BE REMOVED INCLUDING ALL ABANDONED WIRING, CONDUIT, BOXES, ETC.
19. PROVIDE NEW SINGLE POLE SWITCH TO CONTROL NEW EXHAUST FAN EF-1. SURFACE MOUNT SWITCH ON EXISTING CONCRETE BLOCK WALL ADJACENT TO EXISTING FLUSH MOUNTED LIGHT SWITCHES USING SURFACE METAL RACEWAY SYSTEM EQUAL TO WIREMOLD V100 SERIES. PROVIDE NEW WIRING IN EXISTING CONDUITS AS REQUIRED TO CONNECT NEW SWITCH.

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REGISTERED PROFESSIONAL ENGINEER
RAYMOND A. KOLKMAN
175780
3/24/06
STATE OF UTAH

PROJECT TITLE:

Ogden Armory-Roofing Improvements

OWNER:

State of Utah-DFCM

Utah National Guard
Salt Lake City, Utah

MARK	DATE	DESCRIPTION
1	2/24/06	ADDENDUM NO. 1

ISSUE TYPE: CONSTRUCTION DOCUMENTS

ISSUE DATE: JAN. 30, 2006

DFCM PROJECT NO:	05040470
CONTRACT NO:	057039
CAD PROJECT NO:	N/A
CAD DWG FILE:	E-103.dwg
ARCH PROJECT FILE:	0505.pj\0505.db\cps.dr
DRAWN BY:	W.B.G.
CHK'D BY:	R.G.K.
COPYRIGHT:	State of Utah

SHEET TITLE

SECOND FLOOR AND PARTIAL SITE ELECTRICAL PLANS

SHEET NUMBER

E-103

SHEET OF

EQUIPMENT SCHEDULE

EQUIP. NO.	DESCRIPTION	CIRCUIT NUMBER	VOLTS	PHASE	WATTS H.P.	BREAKER	STARTERS FURNISH	STARTERS INSTALL	STARTERS SIZE	AUX. CONT.	LOCATION
RTU-1	ROOFTOP AC UNIT	H-13	208	3	18.1 AMPS	3P-25A (NOTE 1)	M	M	M	-	LOW ROOF
RTU-2	ROOFTOP AC UNIT	H-19	208	3	22.1 AMPS	3P-30A (NOTE 1)	M	M	M	-	LOW ROOF
RTU-3	ROOFTOP AC UNIT	H-25	208	3	25.7 AMPS	3P-35A (NOTE 1)	M	M	M	-	LOW ROOF
RTU-4	ROOFTOP AC UNIT	H-26	208	3	25.7 AMPS	3P-35A (NOTE 1)	M	M	M	-	MID LEVEL ROOF
RTU-5	ROOFTOP AC UNIT	H-20	208	3	25.7 AMPS	3P-35A (NOTE 1)	M	M	M	-	MID LEVEL ROOF
RTU-6	ROOFTOP AC UNIT	H-14	208	3	22.1 AMPS	3P-30A (NOTE 1)	M	M	M	-	MID LEVEL ROOF
EF-1	ROOFTOP EXHAUST FAN	D-27	120	1	1/6 HP	1P-15A	E	E	SEE MFR	-	MID LEVEL ROOF

NOTES:

1. BREAKER/FUSE RATING BASED ON SPECIFIED CARRIER ROOFTOP UNITS PUBLISHED LITERATURE. PROVIDE BREAKER/FUSE RATING IN ACCORDANCE WITH ROOFTOP UNIT NAMEPLATE FURNISHED TO JOB SITE. COORDINATE WITH MECHANICAL CONTRACTOR.

E - ELECTRICAL CONTRACTOR
M - MECHANICAL CONTRACTOR

FIXTURE SCHEDULE

SYMBOL	MANUFACTURER	CATALOG NUMBER	DESCRIPTION	LAMP
F-1	GARDCO GE LIGHTING INVUE LITHONIA LSI INDUSTRIES STERNER	DF7-SM-NSP-100MH-120-NP-BD/PTA CFSX-10M-M-G-H-1-4-GREY-K/ BBA-BLK-CFSX VFS-K-100MH-120-NS-SF-BD-AP KLF2-100M-SP-120-DNA-BD DRS-SP15-100MH-FP-MT-PLP/PT-BD PL6-100MH-SP-120-C-SW-N-BD-AL	METAL HALIDE ARCHITECTURAL FLOODLIGHT WITH CAST ALUMINUM HOUSING, NATURAL ALUMINUM PAINT FINISH, NARROW SPOT LIGHT DISTRIBUTION, BARN DOOR VISOR, 120 VOLT HIGH POWER FACTOR BALLAST AND POLE TOP ADAPTOR FOR 2-3/8" OD PIPE.	100 W MH ED-17

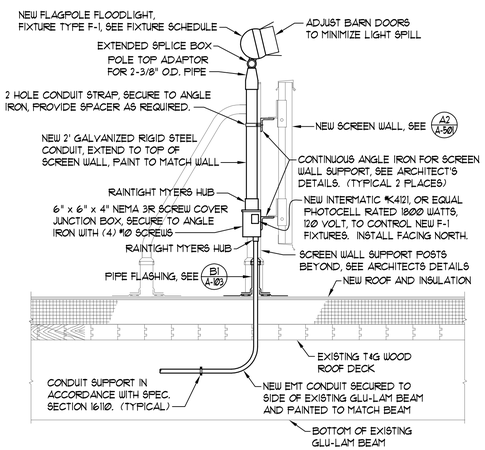
NEW PANEL 'H'
TYPE 'NQOD', BOLT ON
3 POLE 225 AMP MAIN LUGS

10,000 A.I.C., FULLY RATED
120/208 VOLT, 3 PHASE, 4 WIRE
SURFACE MOUNTED

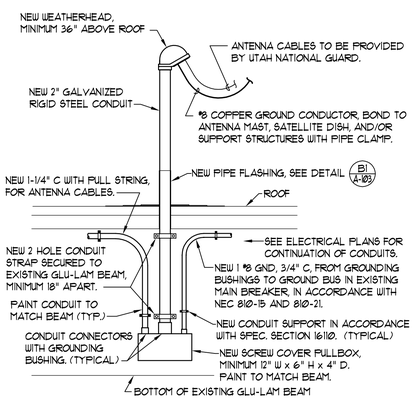
CIR NO.	BRKR P	BRKR AMPS	DESCRIPTION	NO. LTS	NO. REC	CIRCUIT LOAD	PHASE LOAD - VA PHASE A	PHASE B	PHASE C	CIRCUIT LOAD	NO. REC	NO. LTS	DESCRIPTION	BRKR P	BRKR AMPS	CIR NO.
1	1	20	FLAGPOLE LIGHTS ON ROOF	2		260	260						SPARE	1	20	2
3			SPARE					0					SPARE			4
5			SPARE						0				SPARE			6
7			SPARE				0						SPARE			8
9			SPARE					0					SPARE			10
11	1	20	REC, LOW ROOF AC UNITS		3	540			1,080	540	3		REC, MID ROOF AC UNITS	1	20	12
13	3	25	RTU-1, EAST LOW ROOF			2,245	4,900			2,655			RTU-6, EAST MID ROOF	3	30	14
15	-	-	-			2,245		4,900		2,655			-	-	-	16
17	-	-	-			2,245			4,900	2,655			-	-	-	18
19	3	30	RTU-2, CENTER LOW ROOF			2,655	5,740			3,085			RTU-5, CENTER MID ROOF	3	35	20
21	-	-	-			2,655		5,740		3,085			-	-	-	22
23	-	-	-			2,655			5,740	3,085			-	-	-	24
25	3	35	RTU-3, WEST LOW ROOF			3,085	6,170			3,085			RTU-4, WEST MID ROOF	3	35	26
27	-	-	-			3,085		6,170		3,085			-	-	-	28
29	-	-	-			3,085			6,170	3,085			-	-	-	30
31	1		SPACE				0						SPACE	1		32
33								0								34
35									0							36
37							0									38
39								0								40
41	1		SPACE						0				SPACE	1		42
							17,070	16,810	17,890							

TOTAL CONNECTED LOAD: 51,770 VA 144 AMPS
CALCULATED FEEDER DEMAND, NEC 220: 54,149 VA 150 AMPS FEEDER: 4 #3/0, 1 #4 GND, 2" C

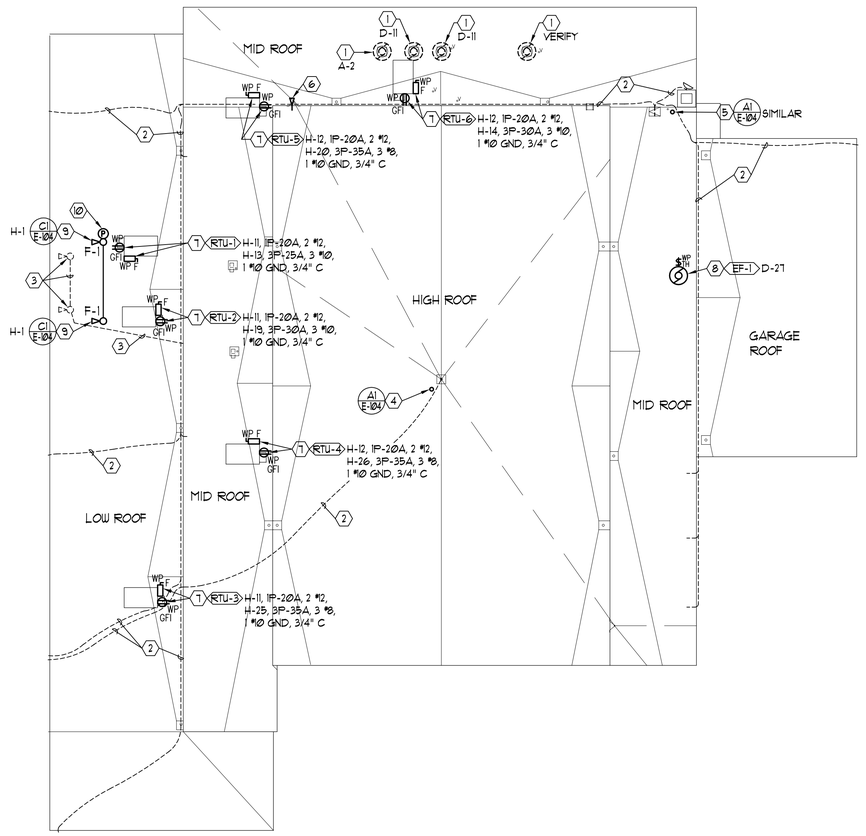
1 PANEL 'H' SCHEDULE MOVED FROM SHEET E-601, NO CHANGE TO SCHEDULE.



C1 FLOODLIGHT MOUNTING DETAIL
SCALE: 3/4" = 1'-0"



A1 ANTENNA MAST DETAIL
SCALE: 3/4" = 1'-0"



A3 ROOF ELECTRICAL PLAN
SCALE: 1/16" = 1'-0"

NORTH

GENERAL ELECTRICAL NOTES:

1. LOCATIONS OF EXISTING ELECTRICAL EQUIPMENT, BRANCH CIRCUIT WIRING, ETC., ARE BASED ON EXISTING BUILDING ELECTRICAL DRAWINGS AND FIELD OBSERVATION OF EXISTING SURFACE CONDITIONS. FIELD VERIFY EXISTING LOCATIONS AND CIRCUITING AND IMMEDIATELY NOTIFY THE ARCHITECT OF ANY DISCREPANCIES WHICH MAY ADVERSELY AFFECT COMPLETION OF THE WORK.
2. DEMOLITION IS SHOWN FOR CONTRACTORS REFERENCE ONLY. FIELD VERIFY QUANTITIES AND LOCATIONS OF ALL EXISTING MATERIAL AND EQUIPMENT TO BE REMOVED. REMOVE ALL ABANDONED CONDUIT WIRING, JUNCTION BOXES, OUTLETS, EQUIPMENT, ETC., WHETHER SPECIFICALLY SHOWN OR NOT.
3. TAKE ALL PRECAUTIONS NECESSARY TO AVOID DAMAGE TO THE EXISTING BUILDING. REPAIR ALL DAMAGE INCURRED BY DEMOLITION AND NEW CONSTRUCTION TO EXACTLY MATCH SURROUNDING SURFACES AND/OR CONDITIONS WITHOUT ADDITIONAL COST TO THE OWNER. COORDINATE REPAIRS WITH THE GENERAL CONTRACTOR.
4. COORDINATE NEW MECHANICAL EQUIPMENT LOCATIONS WITH MECHANICAL PLANS AND MECHANICAL CONTRACTOR.
5. INDICATED NEW CONDUIT ROUTING IS APPROXIMATE ONLY. FIELD COORDINATE NEW CONDUIT ROUTING WITH EXISTING LIGHT FIXTURES, EXISTING CONDUITS, EXISTING PIPING, ETC.
6. COORDINATE EXISTING ROOFTOP EQUIPMENT LOCATIONS WITH ARCHITECTURAL ROOF PLAN, SHEET A-101.
7. REPLACE ALL EXISTING LIQUID-TIGHT FLEXIBLE CONDUIT AT EXISTING EQUIPMENT CONNECTIONS ON ROOF WITH NEW LIQUID-TIGHT FLEXIBLE STEEL CONDUIT.

KEYED NOTES:

1. DISCONNECT ELECTRICAL SERVICE TO EXISTING ROOFTOP EXHAUST FAN TO ALLOW EQUIPMENT REMOVAL AND INSTALLATION OF NEW ROOF. RECONNECT ELECTRICAL SERVICE UPON REINSTALLATION OF EQUIPMENT. EQUIPMENT WILL BE RAISED FOR INSTALLATION OF NEW ROOF. EXTEND EXISTING CONDUIT TO RAISED EQUIPMENT AND PROVIDE NEW CONDUCTORS OF SUFFICIENT LENGTH REQUIRED TO RECONNECT THE EQUIPMENT.
2. REMOVE EXISTING ANTENNA CABLES AND REPAIR EXISTING WINDOW FRAME AND/OR EXTERIOR WALL PENETRATIONS AS REQUIRED TO MATCH SURROUNDING SURFACES WHERE CABLES ARE REMOVED. COORDINATE REQUIREMENTS WITH ARCHITECT, GENERAL CONTRACTOR, AND UTAH NATIONAL GUARD.
3. REMOVE EXISTING FLAGPOLE FLOODLIGHTS INCLUDED ALL ASSOCIATED WIRING, CONDUIT, BOXES, ETC. REPAIR EXISTING WALL TO MATCH SURROUNDING SURFACES AT EXISTING CONDUIT PENETRATION.
4. NEW WEATHERHEAD MAST AS SHOWN ON DETAIL A1/E-104 FOR HIGH ROOF ANTENNA. PROVIDE 1-1/4" CONDUIT WITH PULL STRING TO EXISTING COMMUNICATION ROOM. SEE SHEET E-103 FOR CONTINUATION OF CONDUIT INSIDE OF BUILDING.
5. NEW WEATHERHEAD MAST FOR EXISTING SATELLITE DISH, SIMILAR TO DETAIL A1/E-104 EXCEPT WITH MINIMUM 8" x 8" x 4" SCREW COVER PULLBOX. EXISTING COMMUNICATION CABLES WILL BE RELOCATED TO NEW PULLBOX BY UTAH NATIONAL GUARD. SEE SHEET E-103 FOR LOCATION OF INTERIOR PULLBOX.
6. NEW WEATHERHEAD FOR RADIO ANTENNA 12"± BELOW HIGH LEVEL ROOF. PROVIDE 1" CONDUIT THROUGH EXTERIOR CONCRETE BLOCK WALL TO NEW PULLBOX ON INTERIOR OF BUILDING AS SHOWN ON SHEET E-103. SEAL CONDUIT PENETRATION THROUGH WALL WATERTIGHT WITH NON-SHRINK GROUT TO MATCH EXTERIOR BRICK COLOR.
7. NEW PACKAGED ROOFTOP AIR CONDITIONING UNIT, SEE MECHANICAL PLANS. PROVIDE NEW WEATHERPROOF HEAVY DUTY FUSED SAFETY SWITCH, NEW WEATHERPROOF GFCI RECEPTACLE, AND NEW ELECTRICAL SERVICE AS SHOWN. PROVIDE FUSE SIZE IN ACCORDANCE WITH ROOFTOP UNIT NAMEPLATE. SEE SHEETS E-102 AND E-103 FOR CONDUIT PENETRATIONS THROUGH ROOF. FIELD COORDINATE SAFETY SWITCH LOCATION TO PROVIDE MINIMUM 3 FT WORKING CLEARANCE AND NOT BLOCK ANY ROOFTOP UNIT ACCESS PANELS.
8. NEW ROOFTOP EXHAUST FAN, SEE MECHANICAL PLANS. PROVIDE NEW WEATHERPROOF MANUAL MOTOR STARTING SWITCH THERMAL PROTECTION, AND NEW ELECTRICAL SERVICE AS SHOWN. SEE SHEET E-103 FOR CONDUIT PENETRATION THROUGH ROOF.
9. NEW F-1 FIXTURE MOUNTED ON NEW SCREEN WALL, SEE DETAIL C1/E-104. SEE SHEET E-102 FOR CONTINUATION OF NEW CIRCUIT.
10. PROVIDE NEW PHOTOCELL TO CONTROL NEW F-1 FIXTURES. INSTALL ON FIXTURE JUNCTION BOX AS SHOWN ON DETAIL C1/E-104.

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REGISTERED PROFESSIONAL ENGINEER
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3/24/06
STATE OF UTAH

PROJECT TITLE:

Ogden Armory-Roofing Improvements

OWNER:

State of Utah-DFCM

Utah National Guard
Salt Lake City, Utah

MARK	DATE	DESCRIPTION
1	2/22/06	ADDENDUM NO. 1

ISSUE TYPE: CONSTRUCTION DOCUMENTS

ISSUE DATE: JAN. 30, 2006

DFCM PROJECT NO:	05040470
CONTRACT NO:	057039
CAD PROJECT NO:	N/A
CAD DWG FILE:	E-104.dwg
ARCH PROJECT FILE:	0505.pj\0505.db\cps.dr
DRAWN BY:	W.B.G.
CHK'D BY:	R.G.K.
COPYRIGHT:	State of Utah

SHEET TITLE

ROOF ELECTRICAL PLAN, DETAILS, AND SCHEDULES

SHEET NUMBER

E-104

SHEET OF

NEW PANEL 'M'
TYPE 'I-LINE'
3 POLE 800 AMP MAIN LUGS

22,000 A.I.C., FULLY RATED
120/208 VOLT, 3 PHASE, 4 WIRE
SURFACE MOUNTED

CIR NO.	BRKR P	BRKR AMPS	DESCRIPTION	NO. LTS	NO. REC	CIRCUIT LOAD	PHASE LOAD - VA PHASE A	PHASE B	PHASE C	CIRCUIT LOAD	NO. REC	NO. LTS	DESCRIPTION	BRKR P	BRKR AMPS	CIR NO.
1	3	100	SPACE				5,730			5,730			PANEL 'E' *	3	70	2
	-	-	-					4,580		4,580			(NORTH BALCONY)	-	-	
	-	-	-						4,580	4,580			-	-	-	
3	3	90	PANEL 'D' *			9,810	16,320			6,510			PANEL 'C' *	3	70	4
	-	-	(SOUTH BALCONY)			8,430		13,870		5,440			(SOUTH MAIN LEVEL)	-	-	
	-	-	-			7,580			12,100	4,520			-	-	-	
5	3	100	SPACE				0						SPACE	3	100	6
	-	-	-					0					-	-	-	
	-	-	-						0				-	-	-	
7	3	125	PANEL 'A' *			10,460	26,560			16,100			PANEL 'B' *	3	175	8
	-	-	(EAST MAIN LEVEL)			11,000		24,510		13,510			(NORTH MAIN LEVEL)	-	-	
	-	-	-			11,720			26,390	14,670			-	-	-	
9	3	200	NEW PANEL 'H'			17,070	33,770			16,700			PANEL 'G' *	3	200	10
	-	-	-			16,810		34,310		17,500			(SHOP BUILDING)	-	-	
	-	-	-			17,890			30,090	12,200			-	-	-	
11	3	200	PANEL 'BR'			10,330	10,330						SPACE	3	225	12
	-	-	(BOILER ROOM)			11,890		11,890					-	-	-	
	-	-	-			9,910			9,910				-	-	-	
13	3	225	SPACE				0						SPACE	3	225	14
	-	-	-					0					-	-	-	
	-	-	-						0				-	-	-	
							92,710	89,160	83,070							

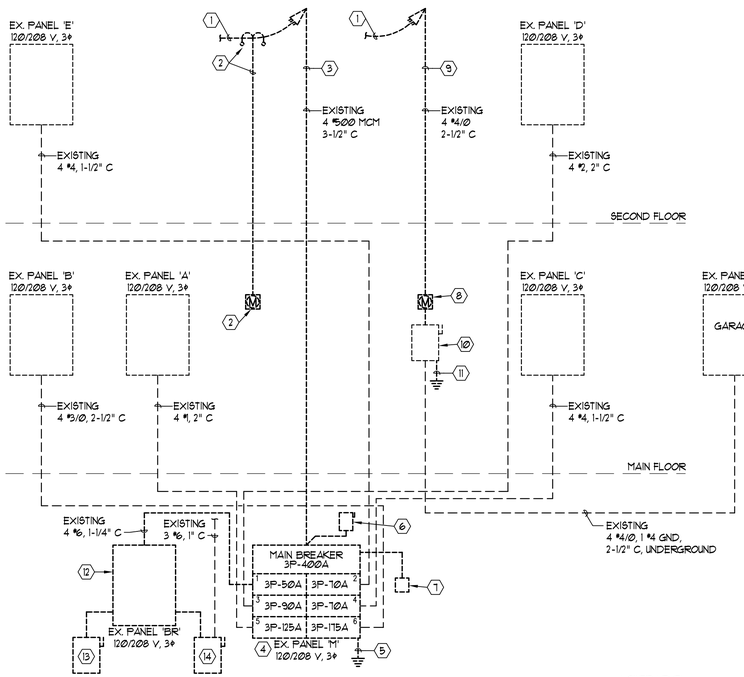
TOTAL CONNECTED LOAD: 264,940 VA 735 AMPS FEEDER: 8 #500 KCM, 2 #1/0 GND,
CALCULATED FEEDER DEMAND, NEC 220.87: 157,762 VA 438 AMPS (2) 3-1/2" C

* ESTIMATED LOAD FOR EXISTING PANELS BASED ON ORIGINAL BUILDING ELECTRICAL PLANS

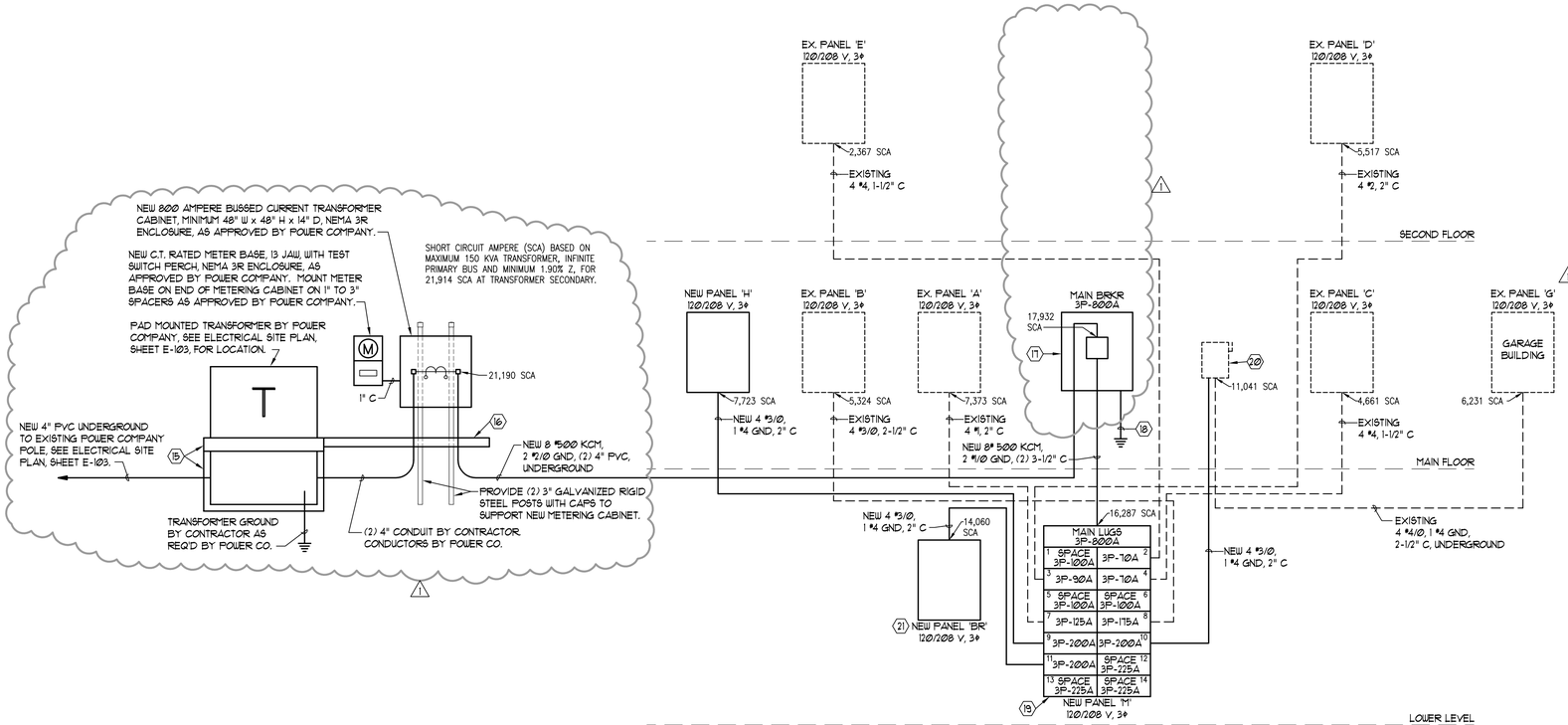
ELECTRICAL LOAD CALCULATION

LOAD DESCRIPTION	CONNECTED LOAD - VA	DEMAND FACTOR	CALCULATED DEMAND - VA	2005 NEC REFERENCE	NOTES
EXISTING BUILDING DEMAND: 38 KW AT ESTIMATED 90% PF	42,222	125%	52,778	220.87	1
NEW FLAGPOLE FLOODLIGHTS	260	125%	325	215.3	
NEW RECEPTACLES	1,260	>10 KVA @ 50%	1,260	220.44	
LARGEST NEW MOTOR (RTU-3)	9,255	125%	11,569	430.24	
OTHER NEW MOTORS (RTUs)	41,175	100%	41,175	430.24	
NEW EXHAUST FAN EF-1, 1/6 HP	530	100%	530	430.24	
EXISTING PANEL 'G'	46,400		50,125	220.40	2
TOTAL LOADS	141,102 VA		157,762 VA		
	392 AMPS		438 AMPS		
MINIMUM REQUIRED SERVICE SIZE:			450 AMPERE		
NEW SERVICE SIZE:			800 AMPERE		3

NOTES:
1. MAXIMUM 38 KW DEMAND FROM POWER COMPANY FOR PERIOD JUNE 2004 THROUGH MAY 2005 AT ESTIMATED 90% POWER FACTOR.
2. SHOP BUILDING PANEL 'G' RECONNECTED FROM EXISTING SEPARATE SERVICE TO NEW ELECTRICAL SERVICE.
3. NEW 800 AMPERE SERVICE PROVIDED TO ALLOW FUTURE ELECTRICAL LOAD ADDITIONS.



A3 EXISTING POWER RISER DIAGRAM
SCHEMATIC



A3 NEW POWER RISER DIAGRAM
SCHEMATIC

GENERAL NOTES:

1. LOCATIONS OF EXISTING ELECTRICAL EQUIPMENT, BRANCH CIRCUIT WIRING, ETC., ARE BASED ON EXISTING BUILDING ELECTRICAL DRAWINGS AND FIELD OBSERVATION OF EXISTING SURFACE CONDITIONS. FIELD VERIFY EXISTING LOCATIONS AND CIRCUITING AND IMMEDIATELY NOTIFY THE ARCHITECT OF ANY DISCREPANCIES WHICH MAY ADVERSELY AFFECT COMPLETION OF THE WORK.
2. DEMOLITION IS SHOWN FOR CONTRACTORS REFERENCE ONLY. FIELD VERIFY QUANTITIES AND LOCATIONS OF ALL EXISTING MATERIAL AND EQUIPMENT TO BE REMOVED. REMOVE ALL ABANDONED CONDUIT WIRING, JUNCTION BOXES, OUTLETS, EQUIPMENT, ETC., WHETHER SPECIFICALLY SHOWN OR NOT.
3. TAKE ALL PRECAUTIONS NECESSARY TO AVOID DAMAGE TO THE EXISTING BUILDING. REPAIR ALL DAMAGE INCURRED BY DEMOLITION AND NEW CONSTRUCTION TO EXACTLY MATCH SURROUNDING SURFACES AND/OR CONDITIONS WITHOUT ADDITIONAL COST TO THE OWNER. COORDINATE REPAIRS WITH THE GENERAL CONTRACTOR.
4. COORDINATE INSTALLATION OF NEW ELECTRICAL SERVICE AND METERING WITH LOCAL POWER COMPANY PRIOR TO BEGINNING WORK.
5. POWER OUTAGES TO THE EXISTING BUILDINGS WILL NOT BE ALLOWED EXCEPT AS DIRECTED BY OWNER. SUBMIT REQUESTS FOR POWER OUTAGES TO THE OWNER MINIMUM SEVEN (7) DAYS PRIOR TO ANY PROPOSED POWER OUTAGES. DO NOT TAKE ANY POWER OUTAGES WITHOUT OWNER'S PERMISSION.

KEYED NOTES:

1. EXISTING OVERHEAD SERVICE CABLE TO BE REMOVED BY POWER COMPANY.
2. EXISTING CURRENT TRANSFORMERS AND METER TO BE REMOVED BY POWER COMPANY. CONTRACTOR TO REMOVE ALL EXISTING WIRING, CONDUIT, AND ENCLOSURES ASSOCIATED WITH EXISTING METERING.
3. REMOVE EXISTING SERVICE CONDUCTORS, WEATHERHEAD, ACCESSIBLE CONDUIT, ETC., COMPLETE. EXISTING CONDUIT CONCEALED IN EXTERIOR BRICK WALL MAY BE ABANDONED IN PLACE. PROVIDE CAP ON EXPOSED CONDUIT ON BUILDING EXTERIOR. PAINT EXISTING EXTERIOR EXPOSED CONDUIT TO MATCH WALL.
4. REMOVE EXISTING 400 AMPERE MAIN PANEL 'M'. RETAIN EXISTING PANEL FEEDERS AS REQUIRED FOR CONNECTION TO NEW PANEL 'M'.
5. REMOVE EXISTING #1/0 GROUNDING ELECTRODE CONDUCTOR. RECONNECT EXISTING BONDING CONNECTIONS TO MECHANICAL PIPING TO NEW GROUND BUS IN NEW MAIN BREAKER.
6. REMOVE EXISTING 1P-20A FUSED SAFETY SWITCH FOR EXIT LIGHT CIRCUIT AND RECONNECT TO NEW PANEL 'BR'.
7. REMOVE EXISTING 1P-20A ENCLOSED CIRCUIT BREAKER FOR BOILER CONTROL PANEL AND RECONNECT TO NEW PANEL 'BR'.
8. EXISTING METER TO BE REMOVED BY POWER COMPANY. CONTRACTOR TO REMOVE EXISTING 200 AMPERE METER SOCKET.
9. REMOVE EXISTING SERVICE MAST AND CONDUCTORS COMPLETE. REPAIR EXISTING EXTERIOR BRICK WALL AS REQUIRED TO MATCH SURROUNDING SURFACES.
10. EXISTING 3P-200A, NEMA 3R, FUSED SAFETY SWITCH TO REMAIN. PROVIDE NEW CLOSURE PLATE IN TOP OF ENCLOSURE WHERE EXISTING OVERHEAD SERVICE CONDUIT IS REMOVED.
11. REMOVE EXISTING #2 GROUNDING ELECTRODE CONDUCTOR COMPLETE INCLUDING ABANDONED CONDUIT.
12. REMOVE EXISTING PANEL 'BR' AND FEEDER. RETAIN EXISTING BRANCH CIRCUITS FOR CONNECTION TO NEW PANEL 'BR' AT THE SAME LOCATION. SALVAGE EXISTING CIRCUIT BREAKERS FOR OWNER AND PLACE IN STORAGE AS DIRECTED BY OWNER.
13. REMOVE EXISTING 2P-40A FUSED SAFETY SWITCH. RECONNECT EXISTING CIRCUIT TO NEW PANEL 'BR'. FIELD VERIFY LOAD SERVED AND INCLUDE ON NEW PANEL INDEX.
14. REMOVE EXISTING 2P-60A FUSED SAFETY SWITCH. RECONNECT EXISTING CIRCUIT TO NEW PANEL 'BR'. FIELD VERIFY LOAD SERVED AND INCLUDE ON NEW PANEL INDEX.
15. PRE-CAST CONCRETE VAULT WITH CONCRETE LID BY CONTRACTOR, AMCOR OR EQUAL APPROVED BY POWER COMPANY, IN ACCORDANCE WITH POWER COMPANY REQUIREMENTS. PROVIDE MINIMUM 6" CRUSHED GRAVEL BASE UNDER VAULT AND CONCRETE LID EXTENDING BEYOND VAULT.
16. NEW CAST IN PLACE CONCRETE PAD BY CONTRACTOR ADJACENT TO NEW TRANSFORMER FOR METERING CABINET AND METER. PAD TO BE APPROXIMATELY 4'-0" x 6'-0" AND MINIMUM 4" THICK CONCRETE ON 6" THICK CRUSHED GRAVEL BASE. FIELD COORDINATE REQUIREMENTS WITH POWER COMPANY.
17. NEW MAIN BREAKER, 3P-800A, 120/208 V, 3Ø, 4W, 22,000 A.I.C., NEMA 3R ENCLOSURE, WITH SEPARATE NEUTRAL AND GROUND BUSES, AND SERVICE ENTRANCE LABEL.
18. NEW #3/0 GROUNDING ELECTRODE CONDUCTORS TO NEW GROUND RODS AND EXISTING WATER MAIN. SEE ELECTRICAL PLANS, SHEET E-101.
19. INSTALL NEW PANEL 'M' TO REPLACE EXISTING PANEL 'M' AND RECONNECT ALL EXISTING PANELBOARD FEEDERS AS INDICATED.
20. EXISTING 3P-200A, NEMA 3R, FUSED SAFETY SWITCH TO REMAIN. PROVIDE NEW FEEDER TO NEW PANEL 'M' AS INDICATED.
21. INSTALL NEW PANEL 'BR' TO REPLACE EXISTING PANEL 'BR' AND RECONNECT ALL EXISTING BRANCH CIRCUITS. EXTEND AND RECONNECT EXISTING CIRCUITS SERVED BY SEPARATE SAFETY SWITCHES AND ENCLOSED BREAKERS INDICATED ON EXISTING POWER RISER DIAGRAM. SEE PANEL SCHEDULE, SHEET E-101, FOR QUANTITY OF EXISTING CIRCUITS.

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PROJECT TITLE:

Ogden Armory-Roofing Improvements

OWNER:

State of Utah-DFCM

Utah National Guard
Salt Lake City, Utah

MARK	DATE	DESCRIPTION
1	2/22/06	ADDENDUM NO. 1

ISSUE TYPE: CONSTRUCTION DOCUMENTS

ISSUE DATE: JAN. 30, 2006

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CAD PROJECT NO:	N/A
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ARCH PROJECT FILE:	0505.pj\0505.db\cps.dr
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SHEET TITLE

POWER RISER DIAGRAMS AND PANEL SCHEDULES

SHEET NUMBER

E-601

SHEET OF